III. Remarks

Reconsideration and allowance of the subject application are respectfully requested.

The Abstract has been shortened to address the Examiner's formal objection. No new matter has been added.

Claims 1-56 are pending in the subject application. Claims 1, 17, 30, 38, and 44 are independent. Claims 1, 6, 8, 15-17, 24, 30, 38, and 41-43 have been amended. Applicants have added new Claims 44-56 to afford themselves a scope of protection commensurate with the disclosure. The new claims are fully supported in the specification and Drawings, and are believed to be allowable for the reasons to be developed below.

In the Official Action, the Examiner has rejected claims 1, 2, 10-13, 17, 30, and 31 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2006/0274067 to Hidai ("Hidai"). Claims 3-5, 7, 8, 14, 15, 18-23, 25-29, and 32-37 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Hidai in view of U.S. Patent Application Publication No. 2006/0202953 to Pryor et al. ("Pryor"). Claims 38-43 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,771,039 to Ditzik ("Ditzik" in view of U.S. Patent Application Publication No. 2003/0151562 to Kulas ("Kulas"). Applicants thank the Examiner for identifying allowable subject matter in claims 6, 9, 16, and 24. Applicants respectfully submit however, that the Examiner's objections in view of the cited references are inappropriate for the reasons set forth below.

According to one aspect of the Applicants' invention as defined by independent claim 1, Applicants provide in a pointer tracking system including at least two overlapping coordinate input sub-regions defining a generally contiguous input region, each coordinate input sub-region separately tracking pointer movement therein by capturing images using a set of associated cameras having overlapping fields of view and in response generating pointer coordinate data, a method for tracking a pointer across overlapping portions of said coordinate input sub-regions. The method comprises detecting by each coordinate input sub-region pointer movements within overlapping portions of the coordinate input sub-regions and generating by each coordinate sub-

region pointer coordinate data. The pointer coordinate data generated by each of the coordinate input sub-regions as a result of pointer movement within the overlapping portions is processed in accordance with defined logic to yield a single set of pointer coordinate data representing the pointer movement within the overlapping portions.

In contrast, Hidai discloses an image processing apparatus comprising a boundary line designating unit which designates a boundary line for dividing a screen into a plurality of regions and a region selecting unit which selects either inside or outside of the boundary line designated by the boundary line designator as the region to be subjected to image processing. A pair of light beam emission detectors positioned at opposite bottom corners of the screen in conjunction with reflecting film disposed along the upper, right and left sides of the screen allow touch input on the screen to be detected.

Contrary to the Examiner's allegations, Hidai does not show, teach, or suggest the Applicants' invention as claimed. As is clear from Hidai, once the boundary line designating unit designates the boundary line for dividing the screen, image processing is performed **EITHER** on the region outside the boundary line **OR** on the region inside the boundary line depending on the region that is selected by the region selecting unit. These regions in **NO WAY** overlap. Once the region selecting unit selects the region, only that region is subjected to image processing. In addition, Hidai uses the same pair of imaging devices to detect touch input on the region outside the boundary line and on the region inside the boundary line. Thus Hidai **CANNOT AND DOES NOT** teach or suggest overlapping coordinate input sub-regions defining a generally contiguous input region with each coordinate input sub-region ***separately tracking pointer movement therein by capturing images using a set of associated cameras having overlapping fields of view*** and in response generating pointer coordinate data wherein the ***pointer coordinate data generated by each of the coordinate input sub-regions*** as a result of pointer movement within the overlapping portions is processed in accordance with defined logic to yield a single set of pointer coordinate data representing the pointer movement within the overlapping portions. As Hidai uses a single pair of imaging devices, Hidai is incapable of separately tracking pointer movement across overlapping input sub-regions. Accordingly, Applicants respectfully request that the Examiner's rejection of independent claim 1 in view of Hidai be removed. With respect

to the Examiner's rejection in view of Hidai and Pryor, Applicants respectfully submit that Pryor simply fails to remedy the deficiencies of Hidai.

Pryor discloses a method and apparatus for inputting position, attitude (orientation) or other object characteristic data to computers for the purpose of Computer Aided Design, Painting, Medicine, Teaching, Gaming, Toys, Simulations, Aids to the disabled, and internet or other experiences. Electro-optical sensors, and in particularly TV cameras are utilized for providing optically inputted data from specialized datum's on objects and/or natural features of objects. Objects can be both static and in motion, from which individual datum positions and movements can be derived, also with respect to other objects both fixed and moving. Real-time photogrammetry is preferably used to determine relationships of portions of one or more datums with respect to a plurality of cameras or a single camera processed by a conventional PC.

As the Examiner will appreciate, Pryor, similar to Hidai, does not teach or suggest overlapping coordinate input sub-regions defining a generally contiguous input region with each coordinate input sub-region ***separately tracking pointer movement therein by capturing images using a set of associated cameras having overlapping fields of view*** and in response generating pointer coordinate data wherein the pointer coordinate data generated by each of the coordinate input sub-regions as a result of pointer movement within the overlapping portions is processed in accordance with defined logic to yield a single set of pointer coordinate data representing the pointer movement within the overlapping portions. Accordingly, Applicants respectfully submit that neither Hidai nor Pryor, either alone or in combination, teaches or suggests the Applicants' invention as defined by independent claim 1 and thus, respectfully request that this claim and the claims dependent thereon be allowed.

Independent claims 17 and 30 are believed to distinguish patentably over Hidai either alone or in combination with Pryor for the same reasons set forth above. Accordingly, Applicants respectfully submit that these claims and the claims dependent thereon should be allowed.

According to the Applicants' invention as defined by independent claim 38, Applicants provide a touch system comprising a large-scale touch surface, at least three imaging devices positioned along at least one side of the touch surface at spaced

locations, each of the imaging devices looking across at least a portion of the touch surface, fields of view of the imaging devices overlapping in a manner so that each location on the touch surface falls within the fields of view of at least two imaging devices and processing structure communicating with the imaging devices, the processing structure processing image data generated by selected imaging devices capturing images of a pointer contacting the touch surface to calculate the position of the pointer contact using triangulation.

In contrast, Ditzik discloses a fiber optic (FO) faceplate coupled to a display device such as a cathode ray tube (CRT) or liquid crystal display (LCD). A pen sensor/emitter film is placed on the front side of the FO faceplate. The FO faceplate is made up of a multiplicity of optical fibers and a dark matrix means. The FO faceplate optically transmits light from one side of the faceplate to the other side with little light loss. Contrary to the Examiner's allegations, Ditzik simply does not teach or suggest imaging devices looking across a touch surface that have overlapping fields of view. The optic fibers disclosed by Ditzik transmit light from the display device through the FO faceplate with little loss. No imaging takes place. Thus, when the entire teachings of Ditzik are regarded, it is clear that Ditzik is simply irrelevant.

Kulas discloses a method for generating display information comprising determining the positions of multiple display screens and generating display information for the display screens by using the determined positions so that different portions of a single scene are displayed upon multiple display screens at the same time to provide a coherent view of the scene from at least one viewpoint. Although Kulas makes generalized statements concerning imaging, the purpose of the imaging performed by Kulas is to determine the orientation of different display screens. Kulas in no way relates to pointer tracking across a large-scale touch surface. As the teachings of Ditzik and Kulas are not related in any manner, one of ordinary skill in the art would not combine the references as alleged by the Examiner. In any event, even if one of ordinary skill in the art combined Ditzik and Kulas as alleged, one of ordinary skill in the art would not arrive at the Applicants' invention as claimed. Neither of these references teaches or suggests pointer tracking across a large-scale touch surface. Accordingly, Applicants

respectfully submit that independent claim 38 and the claims dependent distinguish patentably over the cited references and should be allowed.

New independent claim 44 incorporates the subject matter of original independent claim 1 and original dependent claim 6. As the Examiner has identified allowable subject matter in dependent claim 6, Applicants respectfully submit that this claim and the claims dependent thereon should be allowed.

In view of the above, it is believed the application is in order for allowance and action to that end is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3507. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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